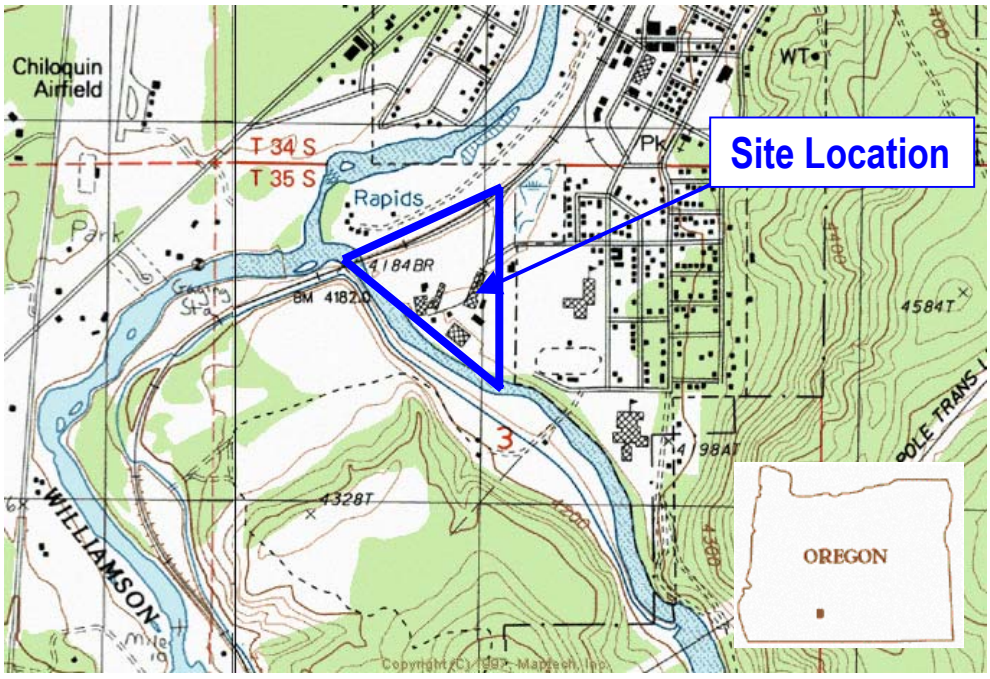
Targeted Brownfield Assessments
Former Chiloquin Forest Products
Chiloquin, Oregon

Project Overview

In May 2003, the Oregon Department of Environmental Quality (DEQ) completed the second part of a phased Targeted Brownfield Assessment (TBA) at a former lumber mill in Chiloquin, with funding from EPA Region 10. The TBA was designed to summarize past evaluations and investigate contamination remaining from historical lumber-mill operations at this 26-acre site. The City of Chiloquin is an economically distressed rural community in south-central Oregon. With funding from the Oregon Economic & Community Development Department, the city and nonprofit facilitators are developing a strategic plan for community economic revitalization, with a particular focus on the former Chiloquin Forest Products site.

Site Background



Chiloquin Lumber & Box Co. was originally built in 1918. A box factory was built in the northern portion of the site and the lumber mill was later built in the southern portion of the site along the Sprague River. The box factory burned down in 1947, but the mill remained in operation until 1988, when its owner declared bankruptcy. Klamath County eventually took possession of the property via foreclosure.

Historic site operations included lumber milling and finishing, chemical storage, equipment maintenance/repair, and vehicle fueling. A 1991 Phase I Environmental Site Assessment on behalf of the bankruptcy trustee revealed the presence of many abandoned containers of oils, solvents, antifreeze, paints, and primers (some clearly having leaked), as well as asbestos-containing materials, areas of stained soil, evidence of underground storage tanks (USTs), and documentation of a former log pond in the northwestern corner of the site (filled sometime after 1968). As a follow-up, DEQ conducted an emergency removal of waste containers and grossly contaminated soil in June 1992, and determined that groundwater was a pathway of concern, due to a locally shallow water table and the presence of municipal drinking-water wells in the site vicinity. In May 1996, DEQ collected soil, sediment, and asbestos samples, found primarily

petroleum contamination, and concluded that six or seven locations on-site needed further investigation. In 1999, Klamath County removed physical hazards from the site, including all structures (except the old boiler house).

What We Did

In compliance with §106 of the National Historic Preservation Act, DEQ and EPA consulted with The Klamath Tribes and the State Historic Preservation Office, and were informed that the site had the potential to be culturally and historically significant. Before initiating field work, DEQ hired an archaeological subcontractor for a cultural resources survey. The survey found that remnant mill structures had no potential to yield important information, and the site was not eligible for listing on the National Register of Historic Places. No surficial prehistoric artifacts or features were observed during the survey, and due to the minimal soil disturbance expected with the TBA, DEQ received approval to begin field work. In September 2002, DEQ collected 22 soil and groundwater samples from areas of concern. In February 2003, DEQ collected an additional 35 soil/groundwater samples, and two water samples from the Sprague River, which forms the site's southwest border. DEQ also attended design and finance "charettes" (focused meetings with community representatives and staff from key public and private organizations) to evaluate cleanup costs, discuss future land-use options, and research sources of redevelopment funding.

What We Found

In the initial investigation, contaminants of concern (COCs) in soil included petroleum hydrocarbons in several areas, a moderate level of benzo(a)pyrene near the former kiln, and a high level of pentachlorophenol (PCP, a wood-treating compound) adjacent to the former mill building. In groundwater, COCs at several locations included PCP, iron, and manganese. In the former mill pond/log deck, comprising 6.5 acres on the northwest side of the site, DEQ estimated that up to 50,000 cubic yards of wood waste were in contact with shallow groundwater. DEQ highlighted this issue because groundwater was interacting with the large volume of wood to produce acid leachate that was liberating iron, manganese, and other metals from soils. DEQ determined that migration of these metals could affect aquatic receptors in the Sprague River. In its follow-up TBA, DEQ delineated the area of PCP soil contamination needing remedial action, and confirmed that metals in groundwater were in fact widespread and migrating to the river.

The Next Steps

To protect human health for future redevelopment scenarios, DEQ recommended cleanup of petroleum-contaminated soil in three areas on-site, and PCP-contaminated soil in a fourth area. DEQ also recommended removal of wood waste from the former mill pond/log deck area to eliminate ecological risks. DEQ presented cost estimates for this cleanup work at a community charette in February 2003. The City of Chiloquin is negotiating with Klamath County over a possible property transfer, and is developing strategies to fund site cleanup and bring new jobs to Chiloquin. As a result of its EPA-funded work in Chiloquin, DEQ has clarified environmental issues at the former mill and enabled the community to focus on thoughtful site reuse.

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